

What is claimed is:

1. A temperature detecting device comprising:

two heat-sensitive resistance elements arranged nearby an arbitrary heater and made even in characteristic; extraction-mode executing means for selectively executing a first voltage extraction mode for connecting the two heat-sensitive resistance elements in parallel between a power source and a ground through one of a pull-up resistance and a pull-down resistance and extracting a voltage of the two heat-sensitive resistance elements by a resistance divisional voltage, and a second voltage extraction mode for connecting any one of the two heat-sensitive resistance elements between the power source and the ground through one of a pull-up resistance and a pull-down resistance and extracting a voltage of the one heat-sensitive resistance element by a resistance divisional voltage; and

determining means for determining whether or not the voltage extracted in the first extraction mode and the voltage extracted in the second extraction mode have a ratio matching a predetermined ratio, thereby determining a presence or absence of failure in the two heat-sensitive resistance elements.

2. A temperature detecting device according to claim 1, the determining means makes the predetermined ratio as

" $1 / (R_p + R_T) : 1 / (2R_p + R_T)$ " provided that the one of the pull-up resistance and the pull-down resistance has a resistance value  $R_p$  and the two heat-sensitive resistance elements have a resistance value  $R_T$ .

3. A temperature detecting device comprising:

two heat-sensitive resistance elements arranged nearby an arbitrary heater and made even in characteristic;

extraction-mode executing means for selectively executing a first voltage extraction mode for connecting the two heat-sensitive resistance elements in series between a power source and a ground through one of a pull-up resistance and a pull-down resistance and extracting respective voltages of the two heat-sensitive resistance elements by a resistance divisional voltage, and a second voltage extraction mode for connecting any one of the two heat-sensitive resistance elements between the power source and the ground through one of a pull-up resistance and a pull-down resistance and extracting a voltage of the one heat-sensitive resistance element by a resistance divisional voltage; and

determining means for determining whether or not the two voltages extracted in the first extraction mode have a ratio matching a predetermined ratio, thereby determining a presence or absence of failure in the two heat-sensitive resistance elements.

4. A temperature detecting device according to claim 3, wherein the determining means makes the predetermined ratio as "1 : 2".

5. A temperature detecting device according to claim 3, wherein provided that the power source is VCC, one of the pull-up resistance and the pull-down resistance has a resistance value  $R_p$ , and the two voltages extracted in the first extraction mode are respectively  $V_{o1}$  and  $V_{o2}$ , a resistance value of the heat-sensitive resistance element of upon executing the second extraction mode by an equation " $R_p \times (V_{o1} - V_{o2}) / (VCC - V_{o1})$ ".